

(C) they have a saturation magnetization of 40-150 emu/g.

20 Claims, 3 Drawing figures

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2. Document ID: US 4675476 A

L1: Entry 2 of 2

File: USPT

Jun 23, 1987

US-PAT-NO: 4675476

DOCUMENT-IDENTIFIER: US 4675476 A

TITLE: Magnetophoresis type display and graphic input/output device using the same

DATE-ISSUED: June 23, 1987

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Kobayashi; Tadashi	Tokyo	N/A	N/A	JPX

ASSIGNEE INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
NEC Corporation	N/A	N/A	N/A	JPX	03

APPL-NO: 6 / 785327

DATE FILED: October 7, 1985

FOREIGN-APPL-PRIORITY-DATA:

COUNTRY	APPL-NO	APPL-DATE
JP	59-212868	October 11, 1984
JP	60-99130	May 10, 1985

INT-CL: [4] G08C 21/00, G09F 19/00

US-CL-ISSUED: 178/18; 340/709, 340/787, 340/788, 40/426, 40/449, 346/21, 434/409

US-CL-CURRENT: 345/173; 345/179, 346/21, 40/426, 40/449, 434/409

FIELD-OF-SEARCH: 178/18, 178/19, 340/706, 340/709, 340/763, 340/764, 340/815.05, 340/787, 340/788, 40/406, 40/426, 40/449, 346/19, 346/21, 346/74.3, 434/409, 33/1M

REF-CITED:

U.S. PATENT DOCUMENTS

PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
<u>3055113</u>	September 1962	Grandjean	346/21 X
<u>3570445</u>	March 1971	Johnson	40/426 X
<u>3591939</u>	July 1971	Payne et al.	340/788 X
<u>4288936</u>	September 1981	Okutsu	40/426

ART-UNIT: 261

PRIMARY-EXAMINER: Schreyer; Stafford D.

ATTY-AGENT-FIRM: Laff, Whitesel, Conte & Saret

ABSTRACT:

A magnetophoresis type display suited to display characters, graphics and other patterns which are entered into a handwriting input device, and a graphic input/output device which, by utilizing such a display, in an input mode generates

WEST**Generate Collection****Search Results - Record(s) 1 through 2 of 2 returned.** **1. Document ID: US 5151032 A**

L1: Entry 1 of 2

File: USPT

Sep 29, 1992

US-PAT-NO: 5151032

DOCUMENT-IDENTIFIER: US 5151032 A

TITLE: Magnetophoretic display panel

DATE-ISSUED: September 29, 1992

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Igawa; Tatsuya	Kanagawa	N/A	N/A	JPX

ASSIGNEE INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Kabushiki Kaisha Pilot	Tokyo	N/A	N/A	JPX	03

APPL-NO: 7/ 551345

DATE FILED: July 12, 1990

INT-CL: [5] B43L 1/00

US-CL-ISSUED: 434/409

US-CL-CURRENT: 434/409

FIELD-OF-SEARCH: 434/309, 434/409, 346/74.3, 346/74.7, 428/309, 40/449, 446/132

REF-CITED:

U.S. PATENT DOCUMENTS

PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
<u>4643684</u>	February 1987	Murata	434/409
<u>4804327</u>	February 1989	Miller	434/409
<u>5018979</u>	May 1991	Gilano et al.	434/409
<u>5057363</u>	October 1991	Nakanishi	434/409

ART-UNIT: 332

PRIMARY-EXAMINER: Apley; Richard J.

ASSISTANT-EXAMINER: Richman; Glenn E.

ATTY-AGENT-FIRM: Sughrue, Mion, Zinn, Macpeak & Seas

ABSTRACT:

A magnetophoretic display panel comprising a plurality of cells that are sandwiched between two substrates and each of which is filled with a liquid dispersion comprising magnetic particles, a dispersion medium, a colorant and, optionally, a thickener. The magnetic particles are such that:

(A) at least 90 wt. % of them have a particle size of 10-150 .mu.m;

(B) they have an apparent density of 0.5-1.6 g/cm.sup.3 ; and

input/output device which, by utilizing such a display, in an input mode generates an electric signal (graphic signal) indicative of coordinates of an input point and, in a display mode, displays a pattern responsive to a graphic signal applied thereto. The display is provided with means for partially erasing a pattern which has been entered and displayed. The partial erase means comprises a carriage loaded with a magnet which is movable vertically and horizontally driven by a drive mechanism.

23 Claims, 22 Drawing figures

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Terms	Documents
magnetophoretic adj display	2

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